

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

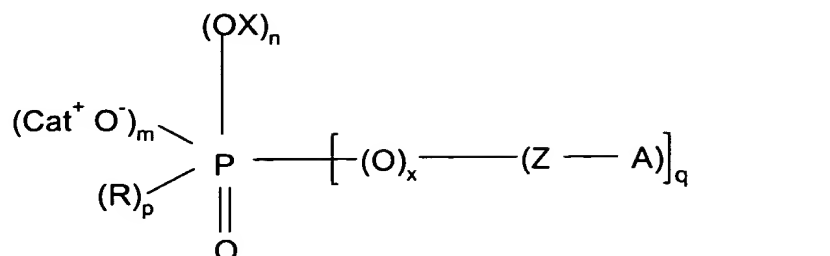
1. (Currently Amended) A composition ~~Functionalised materials~~ comprising an organic phosphorous-containing group groups bonded via an oxygen atom atoms to a mineral oxide of at least one element M, the composition ~~said materials~~ being ~~characterized in that they are~~ essentially amorphous, ~~comprising in that they comprise~~ an essentially monomolecular layer of an organic group groups bonded to the ~~said~~ mineral oxide via an oxygen atom of the ~~said~~ oxide to the phosphorous atom, and the composition is in that said materials are essentially free of a phosphate, phosphonate or phosphinate phase phases of the ~~said~~ element M, and has a ratio of the element M to phosphorus of about 15:1 - 200:1.

2. (Currently Amended) A composition ~~Functionalised materials~~ according to claim 1 comprising, distanced from the phosphorous atom, a sulphur-containing group or a reactive group that can be transformed into a sulphur-containing group, the composition ~~said materials~~ being essentially free of a sulphate phase of the ~~said~~ element M.

3. - 9. (Canceled)

10. (Currently Amended) A process for preparing a functionalized material according to claim 1, comprising contacting a suspension ~~in a liquid~~ of at least one mineral oxide of

an element M in a liquid with at least one solution in a solvent of at least one phosphorous-containing compound with formula I:



wherein ~~in which~~ the sum $m+n+p+q$ is equal to 3, $m=0, 1$ or 2 , $q=0, 1$ or 2 , $x=0$ or 1 , $p=0, 1$ or 2 , R is a hydrocarbon group, X is a hydrogen atom, a hydrocarbon group or a group with formula SiR''_3 , wherein ~~in which~~ R'' is a hydrocarbon group, Z is a hydrocarbon group optionally containing heteroatoms, Cat^+ is a monovalent cation and A is a sulphur-containing group or a reactive group that can be transformed into a sulphur-containing group, the said contact being made under conditions of pressure, temperature and acidity of the medium such that practically no phosphate, phosphonate, phosphinate or sulphate phase of the said element M is formed.

11. (Currently Amended) A process according to claim 10, wherein ~~in which~~ a suspension in a liquid of at least one mineral oxide of element M is brought into contact with a solution in a solvent of a phosphorous-containing compound with formula I wherein ~~in which~~ Cat^+ is a proton H^+ , R is an alkyl group containing 1 to 18 carbon atoms or an aryl group containing 6 to 18 carbon atoms or an alkylaryl group containing 7 to 24 carbon atoms, X is selected from the group consisting of ~~formed by~~ alkyl groups containing 1 to 18 carbon atoms, aryl groups containing 6 to 18 carbon atoms, alkylaryl groups containing 7 to 24 carbon atoms and groups with formula SiR''_3 , wherein ~~in which~~ R'' is a hydrocarbon group, Z is a saturated or unsaturated divalent alkyl group

containing 1 to 18 carbon atoms or a divalent aryl group containing 6 to 18 carbon atoms or a divalent alkylaryl or arylalkyl group containing 7 to 24 carbon atoms, and A is a sulphur-containing group selected from the group consisting of thiols and derivatives thereof and sulphonic acid groups and derivatives thereof.

12. - 15. (Canceled)

16. (Currently Amended) A composition ~~Functionalized materials~~ according to claim 2, comprising an organic sulphur-containing group selected from the group consisting of ~~formed by~~ thiols and derivatives thereof, and ~~said~~ sulphonic acid groups and derivatives thereof.

17. (Currently Amended) A composition ~~Materials~~ according to claim 16, wherein ~~in which~~ the organic sulphur-containing group is selected from the group consisting of a thiol group with formula -SH, a sulphide group with formula -S-R1 ~~in which~~ wherein R1 is a hydrocarbon residue, and a polysulphide group with formula -(S)_y-R1, wherein ~~in which~~ y is a number equal to 2 or more and R1 is a hydrocarbon residue.

18. (Currently Amended) A composition ~~Materials~~ according to claim 16, wherein ~~in which~~ the organic sulphur-containing group is selected from the group consisting of a sulphonic acid group with formula -SO₃H, organic sulphonate groups with formulae - SO₃R1 wherein ~~in which~~ R1 is a hydrocarbon residue, and a mineral sulphonate group with formulae -SO₃(M')_t wherein ~~in which~~ M' is an element with valency t from the periodic table.

19. (Currently Amended) A composition ~~Materials~~ according to claim 18, wherein the said organic sulphur-containing group is ~~said~~ the mineral sulphonate group of the formulae $-\text{SO}_3(\text{M}')_n$ wherein M' is an alkali metal.

20. (Currently Amended) A composition ~~Materials~~ according to claim 2, further comprising a hydrocarbon chain of 1-24 carbon atoms bonding the phosphorous-containing group to the sulphur-containing group.

21. (Currently Amended) A composition ~~Materials~~ according to claim 20, wherein the hydrocarbon chain bonding the phosphorous-containing group to the sulphur-containing group is an aromatic chain, an aliphatic chain, or a saturated aliphatic chain.

22. (Currently Amended) A composition ~~Materials~~ according to claim 1, wherein ~~in which~~ M is ~~designates~~ an element selected from groups 3 - 4 and 8 - 17, IB, IIB, IIIB, IVB, VB, VIB, VIIB, VIII, IIIA, IVA, the lanthanides and ~~or~~ the actinides of the periodic table.

23. (Currently Amended) A composition ~~Materials~~ according to claim 1, wherein ~~in which~~ M is selected from the group consisting of titanium, zirconium, iron, aluminium, silicon and tin.

24. (Currently Amended) A composition ~~Materials~~ according to claim 23, wherein M is titanium, zirconium or aluminium.

25. (Currently Amended) A process according to claim 10, wherein ~~in which~~ the phosphorous-containing compound with formula I is a compound wherein ~~in which~~ Z is a saturated divalent alkyl group containing 1 to 6 carbon atoms.

26. (Currently Amended) A process according to claim 10, wherein ~~in which~~ the solvent for the phosphorous-containing compound is selected from the group consisting of tetrahydrofuran, dimethylsulphoxide, dichloromethane and water.

27. (Currently Amended) A process according to claim 10, wherein ~~in which~~ the phosphorous-containing compound with formula I is a compound ~~in which~~ wherein $m=2$, $q=1$ and $n=p=\text{zero}$.

28. (Currently Amended) A process according to claim 10, wherein ~~in which~~ the phosphorous-containing compound with formula I employed is a compound ~~in which~~ wherein $n=2$, $q=1$ and $m=p=\text{zero}$.

Please add the following new claims:

-29. (New) A composition according to claim 1, wherein the number of phosphorus atoms present in any phase of the composition is less than about 10% of the total number of phosphorus atoms present in the composition.

30. (New) A composition according to claim 1, wherein the number of phosphorus atoms present in any phase of the composition is less than about 10% of the total number of phosphorus atoms present in the composition.--